

CHANTEL CHIZEN

EDUCATION

PhD in Soil Science University of Saskatchewan	2020 – Present <i>ABD, expected Dec. 2024</i>
MSc in Soil Science University of British Columbia	2018 – 2020
BSc in Applied Biology with Honours University of British Columbia Major in Applied Plant and Soil Science / Minor in Commerce	2014 – 2018

RESEARCH EXPERIENCE

Visiting Researcher Alliance of Bioversity [sic] International & CIAT Project: Digital Soil Mapping of Soil Organic Carbon and Related Soil Properties in Crop-Livestock Systems Supervisor: Dr. Mayesse Da Silva	2024
Ph.D. Researcher University of Saskatchewan Dissertation: Wetland Soil Carbon Storage in the Saskatchewan Prairie Pothole Region Supervisor: Dr. Angela Bedard-Haughn	2020 – Present
Summer Research Assistant University of Saskatchewan Project: Soil Carbon Implications with Wetland Drainage Supervisor: Dr. Helen Baulch	2020
MSc Researcher University of British Columbia Thesis: The effects of nitrogen fertilizer rates and planting date on GHG emissions and potato production in Delta, BC Supervisor: Dr. Maja Krzic	2018 – 2020
Undergraduate Research Assistant University of British Columbia Project: Short-term grassland set-asides and soil productivity Supervisors: Dr. Maja Krzic, Jason Lussier, Lewis Fausak	2016 – 2018

Undergraduate Directed Studies Researcher

2017

University of British Columbia

Project: The Effect of Grassland Set-Asides on the Active Soil
Organic Matter Pool

Supervisors: Dr. Maja Krzic, Jason Lussier

Administration Assistant

2016

Agriculture and Agri-Food Canada, Lacombe Research &
Development Centre

PUBLICATIONS

Journal Articles

Chizen, C.J., Helgason, B.L., Weiseth, B., Dhillon, G.S., Baulch, H.M., Schoenau, J.J., & Bedard-Haughn, A.K. (2024). Soil carbon dynamics in drained prairie pothole wetlands. *Frontiers in Environmental Science*, 12. doi: 10.3389/fenvs.2024.1353802

Chizen, C.J., Krzic, M., Black, T.A., Jassal, R., and Smukler, S.M. (2022). Nitrous oxide emissions from productive and degraded potato fields in the Fraser Valley delta of British Columbia. *Canadian Journal of Soil Science*, 102(4). doi:10.1139/CJSS-2022-0032

Lussier, J.M., Krzic, M., Smukler, S.M., Neufeld, K.R., **Chizen, C.J.**, and Bomke, A.A. (2020). Labile soil carbon fractions as indicators of soil quality improvement under short-term grassland set-aside. *Soil Research*, 58, 364-370. doi:10.1071/SR19180

Manuscripts in Submission

Chizen, C.J. & Bedard-Haughn, A.K. Predicting wetland pond permanence using Sentinel-2 satellite imagery. *Frontiers in Remote Sensing*. [under review]

Chizen, C.J. & Bedard-Haughn, A.K. Drivers of soil carbon variability in North America's prairie pothole wetlands: A review. *Wetlands*. [under review]

PRESENTATIONS

Invited Presentations

Chizen, C.J., Bedard-Haughn, A.K. (June 18, 2024). Prairie Pothole Wetland Drainage and Soil Carbon Storage (oral presentation). Canadian Water Resources Association National Conference, Saskatoon, SK.

Chizen, C.J. (Jan. 23, 2024). Soil Carbon Storage Estimates for Drained Prairie Pothole Wetlands (oral presentation). Water Security Agency – Agricultural Water Management Webinar, virtual.

Chizen, C.J. (Nov. 29, 2023). Improving Soil Carbon Storage Estimates for Saskatchewan's Prairie Pothole Wetlands (oral presentation). Water Security Agency – Agricultural Water Management Webinar, virtual.

Chizen, C.J. (Oct. 13, 2023). Soil Carbon Stock Estimates for Saskatchewan's Prairie Pothole Wetlands (oral presentation). University of British Columbia Soil Science Seminar, virtual.

Chizen, C.J. (Mar. 15, 2023). Soil Carbon Sequestration: Where is Carbon Stored and How Agricultural Management Can Help? (oral presentation). Conservation Learning Centre – Crop Talk, Prince Albert, SK.

Conference Presentations

Chizen, C.J., Bedard-Haughn, A.K. (June 11, 2024). Modelling Soil Carbon Storage in Prairie Pothole Wetlands (oral presentation). Canadian Society of Soil Science Annual Meeting, Vancouver, BC.

Chizen, C.J., Bedard-Haughn, A.K. (Mar. 7, 2024). Predicting Prairie Pothole Wetland Classification in Cultivated Fields (poster presentation). Soils and Crops, Saskatoon, SK.

Chizen, C.J., Bedard-Haughn, A.K. (Nov. 1, 2023). Dynamic Soil Salinity Impacts Greenhouse Gas Emissions in Prairie Pothole Wetlands (oral presentation). ASA-CSSS-SSSA Annual Meeting, St. Louis, MO.

Chizen, C.J., Bedard-Haughn, A.K. (June 28, 2023). Soil Carbon Stock Estimates for Saskatchewan's Prairie Pothole Wetlands (oral presentation). Canadian Society of Soil Science Annual Meeting, Truro, NS.

Chizen, C.J., Bedard-Haughn, A.K. (Mar. 7, 2023). Soil Carbon Dynamics Following Prairie Pothole Wetland Drainage (oral presentation). Soils and Crops, Saskatoon, SK.

Chizen, C.J., Bedard-Haughn, A.K. (Nov. 7, 2022). Capturing Soil Carbon Variability in Prairie Pothole Wetlands (5-minute rapid oral presentation and poster presentation). ASA-CSSS-SSSA Annual Meeting, Baltimore, MD. 1st Place Presentation – SSSA Wetland Soils Division

Chizen, C.J., Bedard-Haughn, A.K. (May 25, 2022). Looking Deeper at Soil Organic Carbon Storage in Prairie Potholes (oral presentation). Canadian Society of Soil Science Annual Meeting, Edmonton, AB.

Chizen, C.J., Bedard-Haughn, A.K. (Mar. 8-9, 2022). Monitoring soil carbon storage in prairie pothole wetlands following drainage (poster presentation). Soils and Crops, virtual. 2nd Place Poster Presentation

Chizen, C.J., Kiss, J.J., Bedard-Haughn, A.K. (June 9, 2021). Soil Carbon Storage in Prairie Pothole Wetlands (oral presentation). Canadian Society of Soil Science Annual Meeting, virtual.

Chizen, C.J., Bedard-Haughn, A.K. (Jan. 18, 2021). Carbon Storage in Prairie Potholes: Strategies to Improve Estimates (oral presentation). Prairie Water Annual Partners Meeting, virtual.

Chizen, C.J., Krzic, M., Smukler, S.M., and Black, T.A. (Nov. 9, 2020). Soil Greenhouse Gas Emissions Following Urea Application in an Incubation Experiment (poster presentation). ASA-CSSS-SSSA Annual Meeting, virtual.

Chizen, C.J., Krzic, M., Smukler, S.M., and Black, T.A. (Nov. 12, 2019). The Impacts of Nitrogen Fertilizer Rates on Greenhouse Gas Emissions from Potato Production (oral presentation). ASA-CSSS-SSSA Annual Meeting, San Antonio, TX. 3rd Place Oral Presentation – ASA Soil Carbon and GHG Emissions Community

Chizen, C.J., Krzic, M., Smukler, S.M., and Black, T.A. (July 11, 2019). The Effects of Nitrogen Fertilizer Rate on Greenhouse Gas Emissions and Potato Production in Delta, BC (poster presentation). Canadian Society of Soil Science Annual Meeting, Saskatoon, SK. 2nd Place Poster Presentation

Chizen, C.J., Krzic, M., Smukler, S.M., and Black, T.A. (Jan. 7, 2019). The Effects of Nitrogen Fertilizer Rates and Drainage on Greenhouse Gas Emissions and Soil Properties in Potatoes Fields in Delta, BC (poster presentation). Soil Science Society of America International Meeting, San Diego, CA.

Department Presentations

Chizen, C.J. (Dec. 9, 2022). Estimating soil carbon storage in Prairie potholes: sampling design considerations (oral presentation). Soil Science Mini-Symposium, Saskatoon, SK. 1st Place PhD Presentation

Chizen, C.J. (Mar. 8, 2021). Wetland carbon storage across the Prairie Pothole Region in Saskatchewan (oral presentation). Soil Science Department Seminar, Saskatoon, SK.

CONFERENCE PARTICIPATION

Conference Organization

Soil and Crops Conference, Saskatoon, SK	2021 – 2024
Soil Science Department Mini-Symposium, Saskatoon, SK	2023
Pacific Regional Society of Soil Science Annual Meeting, Abbotsford, BC	2020
Pacific Regional Society of Soil Science Annual Meeting, Vancouver, BC	2018 – 2019

Session Chair

Graduate School Workshop, ASA-CSSS-SSSA Annual Meeting, St. Louis, MO	2023
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PROFESSIONAL AFFILIATIONS

Saskatchewan Institute of Agrologists (Articling Agrologist)	since 2023
Soil Science Society of America / American Society of Agronomy	since 2018
Canadian Society of Soil Science	since 2018

GRANTS AND FELLOWSHIPS

Carbon Sequestration Fellowship	2024
Alliance of Bioversity [sic] International & CIAT / Bezos Earth Fund	
Teacher-Scholar Doctoral Fellowship	2023
University of Saskatchewan	
Saskatchewan Agricultural Development Fund	2022
Government of Saskatchewan; SaskWheat Development Commission	
Led grant writing, budget development, and progress report writing	
NSERC Alliance Grant	2021
NSERC; Water Security Agency	
Supported grant writing and budget development	
FFAR Fellow – Future Leaders in Food and Agriculture Program	2021
Foundation for Food & Agriculture Research	

HONOURS AND AWARDS

Dr. Karl C. Ivarson Agricultural Scholarship Canadian Foundation for Food and Agricultural Education	2023
NSERC Postgraduate Scholarships – Doctoral program NSERC	2021
Saskatchewan Innovation & Opportunity Scholarship University of Saskatchewan; Government of Saskatchewan	2020
Andjelic Land Graduate Award in Agricultural Research Andjelic Land; University of Saskatchewan	2020
British Columbia Graduate Scholarship University of British Columbia; Government of British Columbia	2019
Dean Warren D Kitts Scholarship University of British Columbia	2018
Faculty of Land and Food Systems Graduate Award University of British Columbia	2018
Undergraduate Book Award Canadian Society of Soil Science	2018
BC Council of Garden's Club Rose Bancroft Scholarship BC Council of Garden Clubs / University of British Columbia	2017
Michael J. Goldstein Memorial Service Award PGL Environmental Consultants; University of British Columbia	2017
Noel Roddick Service Award Terralink Horticulture; University of British Columbia	2017
C.A. Rowles Alumni Scholarship University of British Columbia	2017

TEACHING EXPERIENCE

Extension and Education Assistant ē kanātahk askiy - SAGE Project, University of Saskatchewan	2024
Sessional Instructor University of Saskatchewan SLSC 240: Agricultural Soil Science Recognized as being in the <u>top 20% of instructors</u> during for the Winter 2024 term in the College of Agriculture and Bioresources based on student feedback	2024
Teaching Preparation Certificate University of Saskatchewan	2024
Undergraduate Thesis Supervisor University of Saskatchewan	2022 – 2024
Graduate Teaching Assistant University of Saskatchewan AGRC 110: Scientific Literacy and Communication for the Agricultural Sciences ASKI 101: Field Studies in the Environment SLSC 240: Agricultural Soil Science	2021 – 2023
Soil Science Education Content Developer University of British Columbia	2019
Graduate Instructional Skills Workshop / CIRTL Associate UBC Centre for Teaching, Learning and Technology	2019
Graduate Teaching Assistant University of British Columbia APBI 200: Introduction to Soil Science APBI 260: Agroecology I - Introduction to principles and techniques	2018 – 2019

MEDIA AND OUTREACH

BC Food Web. (May 07, 2024). Research Brief: Economic and environmental benefits of reducing nitrogen fertilization in potato fields.

FFAR Fellows Lightning Talk Competition. (Nov. 11, 2023). The Search for Soil Carbon in Prairie Pothole Wetlands. Top 10 Finalist

Foundation for Food and Agriculture Research Insights. (Dec. 14, 2022). Wetlands: Agricultural Soil & Water Management for a Changing Climate.

The Agricultural Industry Advancing Water Management Projects. (May 3, 2022). Water Security Agency News.

Saskatoon StarPhoenix. (Feb. 16, 2022). Young Innovators: U of S study measuring the amount of carbon in Saskatchewan wetland soils.

The Science Pawdcast. (Feb. 3, 2021). Season 2 Episode 54 – Diamond Science, Cold Dog Noses and Chantel Chizen on the importance of Marshes.

SERVICE & LEADERSHIP

Director Ag-West Bio Inc.	2024 – Present
Grant Reviewer Foundation for Food and Agriculture Research	2024
Proposal Reviewer Northeastern Regional Association of State Agricultural Experiment Station Directors	2024
Peer Reviewer CLEAN: Soil, Air, Water Journal	2024
VP Academic USask Soil Science Graduate Student Association	2023 – 2024
Graduate Student Representative Soils and Crops Conference Planning Committee	2021 – 2024
Committee Member ASA-CSSS-SSSA Graduate School Workshop	2021 – 2023
VP Communications USask Soil Science Graduate Student Association	2020 – 2023
Volunteer Science Workshop Facilitator Let's Talk Science	2019 – 2020
Past-President / Student Awards Committee Chair Pacific Regional Society of Soil Science	2019 – 2020
President Pacific Regional Society of Soil Science	2018 – 2019
President-Elect / Website and Media Coordinator Pacific Regional Society of Soil Science	2017 – 2018

SELECTED PROFESSIONAL DEVELOPMENT

Culturally Inclusive Leadership Foundation for Food and Agriculture Research	2024
Group Facilitation Skills: Putting Participatory Values into Practice Community at Work / Foundation for Food and Agriculture Research	2023
Policy and Science Training Supporters of Agricultural Research Foundation	2023
Project Management Fundamentals Foundation for Food and Agriculture Research	2022
The Working Mind for People Leaders University of Saskatchewan / Mental Health Commission of Canada	2022
Crucial Conversations for Mastering Dialogue ® Foundation for Food and Agriculture Research	2021